

NATIONAL INFORMATION MANAGEMENT PROJECT

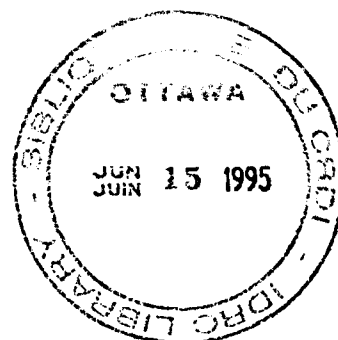
SOUTH AFRICA

Report of the Preparatory Mission

Nabil Harfoush & Kate Wild

Sponsored by the International Development Research Centre

Johannesburg, May 16-31, 1994



INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
REGIONAL OFFICE FOR SOUTHERN AFRICA

9th Floor, Braamfontein Centre, 23 Jorissen Street, Braamfontein, Johannesburg 2001

TELEPHONE: 27 11 403-3952

FAX: 27 11 403-1417

FOREWORD

The Information Sciences and Systems Division and the Southern Africa Regional Office of IDRC are extremely pleased to be associated with the initiative to develop a framework for a National Information Policy for South Africa. This report of a Preparatory Mission is a small but vital input into the formulation of that framework.

As a result of a visit to South Africa and discussions with several members of the current Information Policy Working Committee in late 1993, Mr. Shahid Akhtar, Director, Information, Communications Systems and Networks, proposed that the ISS Division undertake a mission which would provide recommendations for the creation of a broad framework of a national information policy. It was recognized then that this policy would be responsive to the new political realities in South Africa.

In order to ensure that the terms of reference of the proposed mission responded to and reflected the requirements of those responsible for effective information management and utilization, it was decided that a preparatory mission be undertaken by two consultants, Ms Kate Wild and Dr. Nabil Harfoush. To underscore the participatory nature of this mission, it is important to cite key components of their terms of reference: to develop and propose, in consultation with the Information Policy Working Committee of the "Democratic Alliance" within South Africa, terms of reference for an IDRC mission to assist in the establishment of a national information policy and strategy for South Africa; to propose a framework for the development of a national information policy which is responsive to identified public sector needs and priorities; and to establish, within the proposed information policy framework, strategies for the achievement of long, medium and short term goals.

The following document is the report of that preparatory mission. The speed with which events have taken place in South Africa has had a major impact on the work of the two consultants, Wild and Harfoush. The momentum has been such that action plans have already been developed and discussed which could see the realization of some of the short term goals. Indeed, upon reading the report, one can see that undertaking a mission along the lines originally envisaged is somewhat of a moot point. What is abundantly clear is that the policy makers within South Africa are critically aware of the importance of strong, effective, and dynamic information infrastructures, systems and networks. The fact that this first step in defining a national information policy is seen as a valuable contribution to the ultimate goal is most encouraging.

It cannot be overstated that this report does represent a small but important first step. Thus, sharing this document with all the concerned stakeholders is critical, for it will ensure that the emerging dialogue benefits from all sectors and interests - information resources, information management, information systems and networks, and above all, information users. We are delighted to be able to make this report available.

The ISS Division would like to be an active observer as important discussions begin about the design of the framework for the national information policy for South Africa. Indeed, if it is believed that we are able to provide input into the discussions, we stand ready to do so. There are many options which can be explored toward the realization of the long-term goals for policies related to equity of access to information, and we are excited by the opportunity to participate in that exploration.

I would like to take this opportunity to thank Ms. Wild, Dr. Harfoush and the members of the Information Policy Working Committee in South Africa for this important report.

Martha B. Stone

Director General
Information Sciences and Systems Division
International Development Research Centre

EXECUTIVE SUMMARY

This document reports on the results of a preparatory mission funded by the International Development Research Centre to define the broad framework of a national information policy suitable to the present situation in South Africa. The mission was part of a larger process managed by an Information Policy Working Committee and co-ordinated out of the IDRC Regional Office for Southern Africa.

The mission benefited greatly from the guidance of the Working Committee and met, in a two week period, with over 30 institutions from the public, private, NGO and university sectors whose interests represented all aspects of information generation, processing and dissemination. It also had several discussions with the project's broad-based Advisory Group.

Section 1 of the report describes the background of this initiative and its terms of reference.

Section 2 provides the political context: the importance of an information management system to support the implementation of the Reconstruction and Development Programme, to promote more transparent government and to facilitate community involvement in the development process; the Constitutional requirements for 'access to information' and 'privacy of information'; the three tier structure of central, provincial and local government and the complexities involved in the process of moving from four to nine provincial governments and in extending full government service to the whole country; the resources available in all sectors which should be drawn into the information policy process and which could contribute to the development of products and services. These provided the parameters within which the mission examined information issues. It was made clear that some immediate problems were to be addressed and that policy proposals should be cast in a short to medium term time frame.

Section 3 identifies the main challenges that face South Africa at this point in time: gaps in the coverage of information and infrastructure; lack of co-ordination and of a culture favouring the use and sharing of information; structures in flux; a market that could easily be exploited by high-tech suppliers. But opportunities also exist within the country for responding to those challenges by capitalising on the consultation mechanisms that have been established and by drawing on knowledge and expertise from all sectors of the economy.

Information policy issues are covered in section 4. The mission chose to address these issues by proposing broad guiding principles and by identifying major issues which would need to be addressed in the short to medium term.

The mission proposes, in section 5, **the creation of an Information Policy and Co-ordination Unit (IPCU)**. The location of this unit was one of the most difficult problems addressed, largely because of uncertainties with respect to the responsibilities and staffing of some departments within the new government structures. A number of options are therefore outlined in this section. All options would require that 'information liaison officers' be identified in central government departments and provincial governments.

Section 6 turns to proposals for immediate action. A **reinforcement of the secretariat and the information science capacities of the Project Co-ordinating Unit in the IDRC Office** is seen as essential in the short term to provide technical input and support to the IPCU. The mission also recommends that **the present Advisory Group evolve in the direction of more balanced representation from the different information communities**. The other proposals in this section are designed to provide solutions to some of the immediate information problems. **A minimum harmonised data set, based on standards agreed by all relevant users and producers of such a data set, and built using non-conventional techniques and existing data when available** responds to the urgent need for information to implement and monitor the RDP in the face of the huge data gaps that exist at the moment.

An integrated test environment is proposed to test technologies and information packages suitable for wide deployment in an environment which allows communities to provide direct input as to their needs.

A further proposal suggests **developing and keeping up-to-date an inventory of documents produced by the negotiating fora** that have been dealing with a wide range of issues over the last several years. These documents contain information relevant to development processes and represent a unique process.

A final proposal for immediate action is intended to **safeguard records of the former TBVC (Transkei, Bophuthatswana, Venda, Ciskei) states**, whose governments no longer exist, before they are dispersed irrevocably.

These four projects could be initiated by local institutions under the guidance of the Working Committee.

Section 7 identifies three areas for short term studies which are important to lay the ground for further work on issues identified as priority within the policy framework: **the legal framework for information policy; information exchange between central, provincial and local governments; and education and training capacities.**

These studies could all be initiated by IDRC.

Section 8 recommends that **the terms of reference for the main IDRC mission focus on information policy** and suggests that the expertise of the mission reflect this emphasis.

TABLE OF CONTENTS

1. ORIGINS AND OUTLINES OF THE NATIONAL INFORMATION MANAGEMENT PROJECT
2. POLITICAL CONTEXT
3. CHALLENGES AND OPPORTUNITIES
 - 3.1. Information Gaps
 - 3.2. Infrastructure Gaps
 - 3.3. Lack of Co-ordination
 - 3.4. Provincial Structures: Responsibilities and Facilities for Statistics & Computing
 - 3.5. Lack of an Information Culture
 - 3.6. Short Term Pressures
 - 3.7. Opportunities
4. REQUIREMENTS FOR POLICY AND A SUGGESTED FRAMEWORK
 - 4.1. General Principles
 - 4.2. A Policy Framework
 - 4.2.1. Location of the Policy & Co-ordination Function
 - 4.2.2. Centralisation/Decentralisation & Ownership of Information
 - 4.2.3. Charging for Information?
 - 4.2.4. Legal & Administrative Framework
 - 4.2.5. Education & Training
 - 4.2.6. Language & Literacy
 - 4.2.7. Involvement of the 'Military-Industrial Complex'
 - 4.2.8. Technology Policies
5. STRUCTURES FOR POLICY AND CO-ORDINATION
 - 5.1. Scenario # 1 - RDP-based solution
 - 5.2. Scenario # 2 - Inter-Departmental based solution
 - 5.3. Scenario # 3 - Public Service based solution
 - 5.4. Scenario # 4 - Line Department based solution
6. PROPOSALS FOR IMMEDIATE ACTION
 - 6.1. Ad-hoc Co-ordination Structures
 - 6.2. Immediate Activities
 - 6.2.1. Minimum Harmonised Data Set
 - 6.2.2. Survey of Available Data
 - 6.2.3. Integrated Test Environments for Hi-tech Supported Development
 - 6.2.4. An Inventory of Fora Documents
 - 6.2.5. Safeguarding the Data of the TBVC States
 - 6.2.6. Application of Guidelines for Decision Making on New Information Systems in the Short Term

7. SHORT TERM STUDIES
 - 7.1. Legal Framework for Information Policy
 - 7.2. Information Exchange between Central, Provincial and Local Governments
 - 7.3. Survey of South African Education & Training Capacities in the Information Field
8. TERMS OF REFERENCE FOR THE MAIN MISSION AND REQUIRED EXPERTISE

Annexures

- A1. Terms of Reference for the Preparatory Mission
- A2. Members of the Information Policy Working Committee
- A3. Members of the Advisory Group
- A4. Programme of Meetings
- A5. List of Visited Institutions and Contact Names
- A6. Bibliography

1. THE ORIGINS AND OUTLINE OF THE NATIONAL INFORMATION MANAGEMENT PROJECT

In late 1993 the Information Sciences Division of Canada's International Development Research Centre (IDRC) made its first exploratory mission to South Africa. The elections were not far in the future and debate was widespread among all sectors in the country about the shape that the new South Africa would take. A new interim constitution had been prepared and the Reconstruction and Development Programme (RDP) which would guide government action in the event of an ANC victory was under active consideration. A consensus developed that a more systematic approach to information management would be indispensable to enabling a new government to plan, implement and monitor programmes designed to meet its broad development objectives. The IDRC had supported a number of initiatives designed to assist the Democratic Movement to participate in negotiations with the previous government on issues related to economic policy, urban development, science and technology policy and the environment. The role played by neutral experts, with relevant experience, from outside the country, was seen as particularly useful to promote dialogue among diverse groups during the transition and the initial phase of the new government. It was perhaps logical therefore that the Democratic Alliance should seek co-operation with IDRC in defining an overall information policy framework which could effectively address the issues on the agenda of the new government.

Discussions between the Alliance and IDRC concluded that a preparatory mission should attempt to define a broad framework for the development of a National Information Policy responsive to public sector needs and priorities. In the process of developing this framework, the mission would identify and address short term information needs of the government, define areas for which further study was required to supplement the framework, and propose the terms of reference and skills composition of a subsequent mission. This is the report of the preparatory mission which was originally scheduled to take place in early April, prior to the elections, but which was postponed to mid-May. Its terms of reference are attached in Annexure 1.

The preliminary mission is the international component of a broad national process steered by an Information Policy Working Committee whose members are identified in Annexure 2. The Working Committee is supported by an Advisory Group (Annexure 3) which represents a spectrum of organisations with interests in information: as users, as developers of systems and as providers of technology or technological infrastructure. A co-ordinator has been lent by the Development Bank of Southern Africa (DBSA) to handle project planning and scheduling. The members of the preparatory mission have very much appreciated the guidance and assistance of members of both groups as well as that of the project co-ordinator and the project administrator.

The terms of reference of the mission required it to make contact with a wide range of institutions from the public, private, NGO and university sectors dealing with all aspects of the generation, processing and dissemination of information. The programme of meetings of the mission is attached as Annexure 4; Annexure 5 provides a list of visited institutions and contact names. In its discussions the mission attempted to focus first on the management of information and the purposes to which it could be applied, and then on the support that technologies could provide to these processes. It perceives information technology as an enabling technology to facilitate the delivery of information once user communities and needs have been clearly defined through participatory processes. The mission was required to consider the particular skills and resources available in individual institutions and the means

through which more synergy could be established to achieve maximum benefit in the current environment in South Africa.

Members of the mission hope that its presence, and the broad discussions it held, will have contributed to the construction of a firm information foundation for the new South Africa. We hope also that this report will provide the Working Committee with the means to consolidate political support for the process of strengthening information policy and co-ordination functions and to define appropriate work programmes to initiate the immediate actions proposed in it.

The main findings of this report have been presented to the Advisory Group and their comments reflected in the final draft.

The mission recommends that the RDP office be given an opportunity to react to this report and that it then be distributed to the concerned government departments before receiving wider dissemination to the Advisory Group members and other interested groups.

2. THE POLITICAL CONTEXT

A national information policy, as with any national policy, must fit within the overall policy framework defined by the government. The mission developed its understanding of this framework through its programme of meetings and through the documents it consulted (Annexure 6). Particularly important in this context were its discussions with members of the Working Committee and its reading of the new, interim Constitution and the Reconstruction and Development Programme (RDP).

Any proposal for information policy in South Africa today must be directed at ensuring that available information resources be focused on building an information management system to serve two broad communities. The first is government: the main requirement is for a system that actively supports the implementation, monitoring and evaluation of RDP programmes and that facilitates the transparency of government operations. The second is local communities: information should be managed in such a way as to enable the development process to be driven by the needs of communities rather than the needs of the bureaucratic system.

The policy must also respond to the Constitutional requirement for access to information for the 'protection or exercise' of the rights of individuals. It must address the means by which citizens can be made aware of their new rights and remould government habits that favour secrecy over openness. It must help reinforce the image of government as a partner of its citizens.

The interim Constitution calls for nine provincial governments; both the Constitution and the RDP prefigure an active role in governance and development for these governments and for local authorities. Linkages among these political actors and among the sectorial departments will be essential to avoid unnecessary duplication and overlapping of information activities and structures. The policy must therefore support the integration of information vertically and horizontally within all tiers of government and between them.

The political process that has created the new South Africa has involved extensive dialogue among all sectors of society: government and the public sector; non-governmental organisations; civic organisations; and the private sector. Any information policy proposals should build upon this consultative process to ensure that each sector can contribute its own skills and expertise to improving the supply of information. Wherever appropriate, local expertise and technology should be used to build new information systems. Government departments managing information programmes should be encouraged to play a role in the development of broad information policy and to see their own activities as contributing to the overall goals of government.

These broad principles guided the work of the mission and provided a framework for its discussions and deliberations. In this overall context it was made aware of the need to propose solutions to some immediate information problems at the same time as laying the groundwork for a more coherent and co-ordinated strategy in the longer term.

3. CHALLENGES AND OPPORTUNITIES

The South African Government faces unique challenges in its attempt to incorporate information in support of the achievement of its objectives, but it has unique opportunities as well.

3.1. Information Gaps

Many of the challenges arise from the information gaps that resulted from the fragmented approach of previous governments in terms of geography and population. This is evidenced most starkly by the lack of coverage in the census of all the TBVC states (Transkei, Bophuthatswana, Venda, Ciskei). But it is also seen in the low estimates of unemployment and in the lack of measurement of the informal sector. The basic statistical tools have limited geographic coverage and do not include questions designed to measure the well-being of most of the population. Basic data on education, health and housing are lacking for many of the rural areas. There is thus no statistical database to support the implementation and monitoring of the RDP. Census and survey data from the Central Statistical Service is used by a number of organisations, such as DBSA and Industrial Development Corporation (IDC), to construct their own databases but the results vary, often considerably, and inevitably lack authority.

3.2. Infrastructure Gaps

Information gaps are paralleled by infrastructure gaps. Electricity and telecommunications services are not available in many rural areas and to large segments of the population. The country is perhaps unusual in that it is facing a debate on deregulation of the telecommunications industry before the basic infrastructure has been widely installed.

3.3. Lack of Co-ordination

Even if effective systems were in place centrally the challenge of linking them to provincial governments and local authorities still under formation would be considerable. The sharing of information among different levels of government requires agreement on procedures, concepts, standards and formats that does not now exist at the central level either between, or often within, line departments.

Responsibilities for policy on information and information technology on the one hand, and for the operation of the government's main transversal information systems on the other, is separated between two ministries (Public Service & Administration and Finance) and there appears to be little linkage or co-ordination between them. The information systems that are in place are geared to the needs of administration rather than development.

3.4. Provincial Structures: Responsibilities and Facilities for Statistics & Computing

The definition of responsibilities for statistics and computing within the new structure of nine provincial governments and the ownership and control of central government facilities located within the regions will require quick attention in order to avoid duplication of basic data collection and administrative systems and independent appropriation by the provinces of central resources located within their territory. Decision-making on these issues will be complicated by the lack of an overall policy for government information.

3.5. Lack of an Information Culture

There appears to be little culture in government favouring the use of information in decision-making, the sharing of information in support of overall government objectives or access to information by the public. The prevailing culture has rather encouraged secrecy and favoured technology rather than information based solutions to management and information delivery problems. Government will need to develop new attitudes and tools if it is to use information in support of improved management and constructive dialogue with its constituents.

Changes in information culture will also be necessary among the general population if development is to become a community driven process. People and communities will need to be persuaded to trust the supply of information coming from government sources before that information will effectively open up opportunities to them and enhance control of their own environments.

Both bureaucracies and the general public will need to make paradigm shifts in their ways of thinking about information if the RDP is to achieve its goals.

3.6. Short Term Pressures

The unique combination in South Africa of a small highly developed and technologically sophisticated sector alongside large underdeveloped and underprivileged regions has attracted suppliers of information technology from all over the world, including from within the country. The government has not yet developed an information policy and lacks mechanisms to assess information technology proposals in the context of overall government objectives in general and the RDP in particular.

3.7. Opportunities

There are many features of the South African scene which will help it meet these challenges.

In the first place, the spirit of dialogue and consensus building which has been manifested not only in the purely political process but also in the mechanisms set up to address many more technical issues. These have brought together stakeholders from all sectors of society to consider a wide range of issues; the spirit of compromise bodes well for agreement on issues related to information management. Related to this is the vibrancy of the NGO sector which can bring resources to bear on many information issues.

Secondly, South Africa has a much more developed electronics and technology sector than most countries facing similar development problems. Experience in such technologies as telephony, remote sensing and distance education can find application in a development context. There is a potential for the production of innovative products which could be attractive to both internal and external markets.

Finally, in this list which is indicative only, there is a capacity, in the parastatal and private sectors, for managing large scale complex projects of the kind that will be required to implement an information management system that spans sectorial boundaries, encompasses all levels of government and reaches out to the public at large.

4. A FRAMEWORK FOR NATIONAL INFORMATION POLICY

4.1. General Principles

Based on its understanding of the present situation in South Africa, as outlined in the previous sections of this report, the mission proposes that national information policy be guided by the following general principles.

The outcome of the policy must be more intense use of information by all those participating in the development process, and particularly by the government which is managing the process, and the communities which are driving it. Systems and services must recognise the different needs of different groups of users and provide for a multiplicity of packages of information and access and distribution media. RDP managers, and governments more generally at all levels, will need an information management system that provides intelligence: concise, aggregated data on project and programme outcomes. Community development organisations will need more descriptive information in forms and on media suited to local levels of literacy and education.

The policy must promote co-ordination of services and integration of products through negotiation of common concepts, standards, procedures and formats rather than through centralised control. Even within single sectors, the number of users and producers of information who hold stakes in the improved availability of information are too numerous to allow for decision-making to be the responsibility of a single central point. This requirement becomes more evident in the context of the three levels of government that will be functioning in the new South Africa. A centralised co-ordination mechanism will however be required to ensure that information can pass easily among different actors and that unnecessary duplication is avoided. The country cannot afford the cost and complication that will arise if incompatible administrative systems are developed for different provincial governments and the central government and if un-reconcilable data sets are fed into the decision making processes.

The policy must encourage *the design of open and modular information systems* that are hospitable to the addition of specialised information to meet the needs of provincial governments and specialised sectors and that can take advantage of advances in technology.

The policy must encourage to the maximum extent possible the use of local knowledge, expertise and technology. Local knowledge is the touchstone for the identification of needs, local expertise can bear on the design and management of information products and services, local technologies can support the processing and dissemination of information.

The policy must support the constitutional requirement for access to information and encourage transparency with respect to government processes. The policy should be communicated to officials and the public at large in clear, non-technical language; systems should be designed to facilitate access. The onus must be on the producers of information to demonstrate that it is confidential or proprietary and not on the user to demonstrate that it is in the public domain or that they are entitled to access personal information.

Since information use is the desired outcome of the policy it follows that information needs should drive the design of systems and services and related training programmes. Technological choices should be made within the context of the design process and not prior to it. Similarly, the policy will need to encourage training in the use of information and its

application to problem solving at all levels and not simply training in how to use information access tools.

4.2. A Policy Framework

A national information policy provides the framework within which priorities can be established to govern the allocation of resources among different groups of users and sectors. It should guide those activities of the government that deal with the generation, processing and dissemination of all types of information: administrative data, statistics, reference or bibliographic data, texts and images. It should encompass activities related to the processing of information by manual or computer systems and to the dissemination of information through human networks or networks based on computers and telecommunications.

The initial time frame set for short, medium and long term strategies was 2,5 and 10 years respectively. The mission found from an early stage on that this time frame is not suitable for the South African situation, and that a more appropriate time frame would be 6 months, 2 years and 5 years respectively. Such a time frame would match the government term and the time frame for the RDP implementation under that first government term, and would be therefore more relevant to the new South Africa and better adapted to its needs.

What follows is an indicative list of the issues that will need to be addressed in the South African context. Some of these will be discussed in more detail in the sections of this report dealing with areas for further study. The mission recognises that an incremental approach to building an information policy will almost certainly be required.

4.2.1. Location of the policy and co-ordination function

Because the policy function crosses sectorial lines and different levels of government and must be responsive to all these players the mission believes that it should not be located within a line department. However we recognise as well that the determination of the most appropriate location is also based on political considerations and we have therefore outlined a number of options in section 5 of this report (Structures for policy and co-ordination).

4.2.2. Centralisation/decentralisation and ownership of information

The logic of the South African situation suggests a decentralised but co-ordinated approach to information policy; ownership of the systems that are put in place in the process of implementing that policy should reside with the units that are responsible for generating the data or information that they contain. The use of common standards for describing information, data and network infrastructure will ensure broad access while maintenance of the data closest to its producers and first order users should promote improved quality of data and information products.

4.2.3. Charging for information?

If ownership resides with the originating departments decisions will be required on the conditions under which information will be made available to government and the private sector broadly defined. A common approach sees all 'public' information and data generated within the public sector made available to non-profit organisations at no cost beyond the cost of the medium on which it is delivered. The private sector could also be encouraged to make non-confidential and non-proprietary information related to the management of the RDP

available on a similar basis as a contribution to the implementation of the programme at this special point in South African history.

At the present time publicly owned data is being used by the private sector to produce value-added information products which are then available for sale back to the public sector. The government might consider identifying such products and exploring whether it would be more cost effective to develop value-added services on its own behalf. Some of the products developed in support of the RDP may in fact become such products.

4.2.4. Legal and administrative framework

The policy will need to address the legal means of implementing the constitutional rights to 'access to information' and 'privacy of information'. Legal and regulatory instruments will be required to ensure that government responds appropriately to requests for information and maintains confidentiality with respect to individual records. The public will need to learn about their rights to information and the means of realising them. A number of countries have gained experience in this area which could be tapped through information searches of legal databases or through the advice of external consultants. Further work on this complex of questions is proposed in section 7.

4.2.5. Education and training

The mission did not have the opportunity either to identify systematically opportunities for training in subjects related to information science or to assess training needs. Needs cover a wide span: from the 'information officers' proposed for line departments and provincial governments to those who will be responsible at the community level for facilitating access to government services. Resources for training exist in both the public and private sectors. A match should be made between the information expertise available in the public sector, training opportunities and needs for particular information skills in the new environment, as the basis for future allocation of resources to training in the information sector. Proposals are made for work in this area in section 7.

The development mode in which much of the new government will operate under the RDP will require public trust of government information. That trust will have to be encouraged through specially designed training or promotional programmes which will help the public understand how to use government information to shape the system to its own ends.

4.2.6. Language and literacy

The number of languages in use in the country and the relatively low rates of literacy will require that the policy promotes the production of information services in forms that are broadly accessible. This will be particularly important with respect to messages dealing with the way communities can become involved in the RDP process and with basic government services. Experience with the voter education programme may be a point of reference here.

4.2.7. Involvement of the 'military-industrial complex'

Capacities and methodologies exist within this sector to manage, to time and budget, large complex projects. It is the mission's view that some of the projects identified under the information policy will be of this type: they will involve many actors from all sectors of the economy working towards a common goal within a single work programme; they will require strict adherence to technical standards; they will need to deliver results within tight

time frames and with limited budgets. A decision will need to be made as to the appropriateness within the South African context of drawing on these resources to support the implementation of information projects; the proposal for a minimum harmonised data set outlined in section 6 is a possible candidate.

4.2.8. Technology policies

This report has argued that the use of technology to support information processing and delivery should be determined by its appropriateness to the information needs that are to be met by the particular project. But it has not denied that technology can play a critical role in assembling and disseminating information. Section 6 contains a proposal to test certain technologies (and information products) in the context of the delivery of information and services to disadvantaged areas. But decisions will be required on technology questions of longer term consequence: the deregulation, or not, of parts of the telecommunications industry; the continuation, or not, of the GreenSat satellite programme. Such decisions will impact on the implementation of the information policy.

5. STRUCTURES FOR POLICY AND CO-ORDINATION

In terms of structures for information policy and co-ordination the current situation in the South African public sector is characterised by co-ordination structures which are dedicated to parts of the information field and which are fragmented across the different departments. Such structures include: the Sub directorate of Meta-information within the Department of Higher Education which, inter alia, is building a computerised register of all databases that exist in government departments; the Chief Directorate of Data Systems in the Commission for Administration/Public Service Commission (CFA/PSC) which has the responsibility for the establishment of policy frameworks for the acquisition of information systems (hardware & software) within government; the Central Computer Services (CCS) within the Department of Finance which provides operational and network services to the government's transversal information systems; and the Central Statistical Service (CSS) which provides guidance on statistical concepts and definitions within and outside government.

The nature of these structures and their current fragmented administrative affiliations reflect the underlying fundamental problem of the information sector in the government: there is not sufficient awareness of the nature of information, its integrating role or of its cross sectorial span. Where a structure co-ordinates across sectors it is limited in scope and content (for example the CFA/PSC seem to be oriented to the acquisition of systems and is mainly concerned with administrative systems, not with planning and decision making systems). In the majority of cases *information* is mistakenly used as synonym for *information technology*. Information sciences are not recognised by the IT professionals as integral part of the information sector. Some information institutions do not even recognise their own affiliation to that sector, so for example the CSS and the Central Economic Advisory Service (CEAS). The problem seems to have deeper roots extending to the professional associations in IT. The definition of IT by the National Computer Liaison Committee (NCLC), an umbrella organisation for five professional IT associations, defines IT to include information! As a result any 'system' concept is implicitly translated into 'computer system' which adds to the difficulty of introducing the wider concepts of information as accepted internationally.

The existence of these 'co-ordinating' mechanisms has consequently not succeeded in understanding the information flows within government institutions and between these and the outside world, nor in addressing information other than in the traditional electronic databases, nor in preventing the fragmentation of government's databases. Within departments and between departments there is little free exchange of information, and many difficulties in integrating and/or aggregating data in support of planning or decision-making. There appears to be not sufficient co-operation among departments to facilitate the delivery of consolidated information about government services to end users at any level.

In summary, the information policy and co-ordination function, which we deem to be essential for any developed or developing environment, seems to be totally missing in the government structures. Such function is by nature cross-sectorial and must not only over-arch the different government departments, but must also reach out to other sectors outside the government, because of the importance of information flows and processes between the government and the other sectors. The latter aspect becomes more prominent when the declared policy of the government emphasises transparency, accountability, broad development plans, and the empowerment and inclusion of communities in all these processes.

In making recommendations related to the establishment of a central information policy and co-ordination function for the South African government the mission was faced with significant difficulties. The structures of the new government were still in the definition stages during the mission's presence in South Africa. Departments were undergoing complex transformation and redefinition processes. The staff of most ministers, although operating already, was not appointed yet. The whole process was embedded in a struggle of diverse political, institutional and individual interests: the new power fighting to implement the structures needed for its wide ranging reforms and some of the existing government structures passively resisting change to preserve status quo; some institutions striving to survive the restructuring while others looking to subdue competing ones and emerge as dominant in the new order; individuals attempting to save their current jobs and individuals looking for promising new options etc. While on the one hand an unsettled political environment complicates decision making on new structures, on the other it offers a window of opportunity in which political actors may be open to institutionalising new functions which can be demonstrated to facilitate their policy, planning and management tasks.

Due to the constraints that such a complex and dynamic process imposes on the definition and affiliation of a new structure the mission decided to address this issue by submitting different scenarios for the implementation of the information policy and co-ordination function and discussing the advantages and disadvantages of each scenario. In all scenarios the suggested implementation is a small Information Policy & Coordination Unit (IPCU). It could conceivably start with a single person sharing clerical and secretarial support resources of its parent organisation, and develop incrementally as the process gains momentum. The IPCU's co-ordinating mechanism will rely heavily on 'information liaison officers' yet to be identified in the different departments and provincial governments. Its policy making mechanism will rely on a broadly-based advisory council representing all major stake holders. In this way the required staffing for the IPCU is kept to a minimum and does not lead to an inflated structure.

5.1. Scenario # 1 - RDP-Based Solution

In this scenario the IPCU is affiliated to the RDP office. The necessary post(s) could be obtained through the ongoing restructuring process of CSS and CEAS, but in the mission's opinion should be defined *outside* the hierarchies of either of these in order to avoid limiting the scope or content of the IPCU task. The advantage of placing the IPCU within the RDP office is that the RDP itself is an over-arching programme which by necessity has to co-ordinate with and between major departments of the government, as well as with provincial and local governments, and the other sectors of the economy. More importantly the RDP planning, implementation and monitoring process requires a wide range of co-ordinated and integrated information, and hence naturally lends itself to drive the IPCU towards a realistic and practical approach continuously focused on the defined priorities. The disadvantage of placing the IPCU within the RDP office is that it may be perceived as concentrating too much power in the RDP office or overloading it with too many functions (depending whether the critic is outside or inside the RDP office!). More importantly, despite the over-arching nature of the RDP, it does not include *all* government departments and line functions.

5.2. Scenario # 2 - Inter-Departmental Based Solution

In this scenario the IPCU will be implemented as the secretariat of an inter-departmental (or inter-ministerial) committee with the mandate of formulating information policies and co-ordinating information activities in the public sector. The IPCU will still rely on the information liaison officers and an Advisory Council, but will be reporting to the inter-

ministerial committee, which will make the decisions. The committee should include at least the following ministries:

- RDP
- Posts, Telecommunications & Broadcasting Services
- Arts, Culture, Science & Technology
- Public Service & Administration

Other line ministries could conceivably be added to the committee. It is recommended, however, to involve such ministries through an Advisory Council in order to maintain a manageable committee.

The advantage of this scenario is that the function is not perceived to be an RDP function only, and is governed by a number of ministers which provides for a higher central anchorage of the process and better access to the Cabinet. The disadvantage is that the secretariat (unless it is attached to the Cabinet or to the President's office) will have to be hosted in one of the ministries represented in the inter-ministerial committee, and will be permanently pressured to represent the views and interests of the hosting ministry, which are not always sufficiently cross-sectorial.

5.3. Scenario # 3 - Public Service Based Solution

In this scenario an attempt is made to build upon the Ministry for Public Service & Administration's (PS&A) mandate reaching across the civil service to introduce the information policy and co-ordination function to the public sector. The IPCU must be implemented in this case as an independent Directorate or Chief-Directorate and must include under it the previously existing information technology policy structures. It must be reinforced with more broadly information-oriented (not IT oriented) staff particularly at the management level. Its mandate has to clearly establish linkage with a decision-making structure (such as an inter-ministerial committee), as well as with an Advisory Council and the information liaison officers across the public sector(s). It has also to commit the PS&A to the implementation of policies and co-ordination activities approved across the public sector.

The advantage of placing the IPCU within PS&A is that it obviously facilitates the acceptance of this new function into the existing government structures. The IPCU could benefit from the previously established procedures for implementing and enforcing policies within the governmental sector. It also makes it somewhat easier to create the formal linkages between the IPCU and the information liaison officers within the central and provincial governments. The disadvantages of the solution are the following: the current PSC is undergoing an extremely complex and difficult transformation, which will take most of the Ministry's attention and resources, and thus will marginalise the IPCU until the transformation process has reached a more stable phase. This is in contrast to the fact that the IPCU contribution is needed relatively rapidly to facilitate the transformation and allow decisions related to the RDP and other main areas to be taken. The PSC is also heavily oriented towards administration and not much towards planning and decision making, and changing such a culture is never a trivial task. This bias in orientation will inevitably reflect on that of the IPCU. Finally, the previously existing IT policy structures (i.e. The Chief Directorate Data Systems) were mainly technology and acquisitions oriented, but had reached over time a certain level of staffing, which would make it difficult for any new structure supervising them to redress the bias and introduce new areas of information expertise without the addition of several high-calibre posts within the IPCU.

5.4. Scenario # 4 - Line Department Based Solution

In this scenario the IPCU would be hosted in one of the line departments such as the Ministry for Posts, Telecommunications and Broadcasting Services, or the Ministry for Arts, Culture, Science & Technology. The former covers significant parts of the information transportation and dissemination infrastructures serving all other sectors, the latter is a major producer of scientific and technical information, part of which is relevant to many branches of the development process, and may also be the source for new tools and techniques important for that process.

A major disadvantage to placing the IPCU under any line ministry is the limitation imposed by such affiliation to the amount of interaction with, influence on and acceptance by other line ministries. The embedding of such structure within a line ministry invariably results in a strong bias towards the issues and interests of that particular ministry which further dilutes the over-arching capability of the function. As an example an IPCU hosted by the Ministry for Posts, Telecommunications and Broadcasting Services, or the Ministry for Arts, Culture, Science & Technology would become more interested in telecommunications policy or science & technology information systems respectively than in the information needed by all government branches for management, planning and decision making purposes.

An additional concern when the IPCU is hosted by technology or research oriented institutions is the reinforcement of the already existing confusion between *information* and *information technology*, which may lead to the continued absence of the higher concepts of information management within the government. As an example, information management could continue to be understood mainly as the analysis, development, acquisition and deployment of information technology (computer) -based systems. In some cases such continued confusion has led to an inclination towards large scale experimentation with technologies that are interesting from a research and academic point of view, but not always optimal from a developmental point of view.

It would therefore seem that placing a national information policy and co-ordination function in a line department would be detrimental to the objectives and self-defeating to the purpose of establishing such function in the first place.

The mission feels that while the above four scenarios are not an exhaustive review of all possible solutions, they do represent the most important options at this particular point in time. As the situation regarding government structures is evolving very dynamically, other options could emerge soon while some of the above options are extinguished. The nature of the issues addressed in the discussion of the advantages and disadvantages of each solution could be useful when considering these new options. Whatever the final solution looks like it is clear that one of the major issues will be identifying and developing manpower resources with strong capabilities in the lacking areas of information policies and information management. The mission believes that the IDRC can play a useful and constructive role in the provision of technical assistance in these areas for the purpose of supporting the start-up efforts as well as mentoring and assisting local cadre to be entrusted with managing the IPCU. In addition, the IDRC could well be able to assist in providing expert input from Canada and other parts of the world regarding the detailed mechanisms for formulation of information policies, as it has been involved in this area internationally for more than two decades. A formal request for such contributions should be made by the appropriate organisations.

6. PROPOSALS FOR IMMEDIATE ACTION

The terms of reference of IDRC's preparatory team required the identification of particular issues which may need to be researched or background studies and related activities which should be undertaken to facilitate the work of the main IDRC mission and respond to needs identified during the preparatory mission. We have chosen to present our findings regarding this requirement in two distinct categories:

- Immediate activities (Section 6) which are primarily initiated by the South African counterpart (the Working Committee of the National Information Management Project) with possible narrowly focused contributions from IDRC,
- Short term studies (Section 7) which could be initiated by IDRC with different levels of contribution from the South African counterpart.

6.1. Ad-Hoc Co-ordination Structures

The effervescent activities taking place currently on the South African information scene in general and in the context of the 'National Information Management Project' in particular require increasingly complex management & co-ordination in order to bear fruits. Attention must therefore be given to the interim co-ordination and management structures of the immediate and short term activities of which the process currently consists. These structures should be developed with the perspective of contributing to the more permanent structures proposed in this report for managing and co-ordinating the central information function.

It is suggested to evolve the current co-ordination set-up based in the IDRC Regional office for Southern Africa as follows:

The Working Committee will continue to be the **Steering Committee** of the project/process, and will have the responsibility for defining the political priorities, establishing linkages with the RDP management structures and preparing a work programme for the implementation of projects. High on its agenda should be the evolution of the ad-hoc co-ordination structures into the permanent structures referred to in section 5.

The current Co-ordinator position should be evolved towards a **Co-ordination Task Force**, which must include strengthened secretarial support as well as support by high-calibre professional expertise in the relevant information fields (conceivably provided for the first phase by external sources). Such support would allow the current co-ordinator's knowledge of the local scene and his connections with the main role players to be used more effectively toward the achievement of the project goals. Thought should be given as soon as possible in this interim period to the identification and/or preparation of suitable South African cadre for this support role, in particular with regard to fulfilling similar needs in the central information function proposed in this report.

The **Advisory Group** should evolve in the direction of a more balanced representation of the different information inputs needed by the Project. In particular balanced representation of the following groups should be included:

Users: RDP Management, major Government Departments, Provincial Authorities, Development Agencies and User Communities (Urban, Peri-urban and Rural).

Professional Expertise: in Information Sciences, Information Collection Techniques, Information Technology, Telecommunications & Networking, etc. Care should be taken that such expertise is not excessively biased by commercial or individual agendas.

6.2. Short term Activities

This mission has identified a number of urgent issues common to most if not all of the institutions and organisations interviewed. There seems to be a general need for a reliable set of data which could be used for planning and decision making purposes. The lack of such data is leading to the use of admittedly unreliable and incomplete data for decisions of national importance. As an example the economic models of the Central Economic Advisory Service (CEAS) which are submitted to the cabinet and the president are being fed data sets known to be of low quality. The impact of this situation on the output of such models is obvious.

Given the urgency of this need the general census planned for 1996 is not an answer as its results cannot be expected to be available before the end of 1997. Other non-conventional techniques of data collection have to be used.

The nature of the data needed for development planning in any sector has substantial overlapping with the data needs of other sectors. Because the need for such data in South Africa currently runs across almost all sectors including the governmental, parastatal and even private sector, there are currently numerous initiatives and efforts to collect such data for a particular sector or subsector. Evidently, these efforts not only entail much duplication of effort and waste of resources, but more importantly, by lacking standard definition of the common data entities collected, will result in incompatible and non-aggregatable data sets, which are similar in their fragmentation to the legacy data of the apartheid regime.

Another general data-related problem identified by this mission is the lack of knowledge about the fragmented data available within and outside the government. During the 'isolation years' of the apartheid regime substantial resources were committed through the international community in co-operation with the democratic movement for studies and projects related to under-privileged areas and population layers of South Africa. These studies and projects generated important amounts of detailed data which could be very useful particularly for local and provincial needs as well as for understanding representative patterns. In addition government agencies under the previous regime collected information, which was not made accessible for political or 'cultural' reasons. Such information may now be useful in the developmental context of the new RSA.

The challenges facing the new government in the implementation of the RDP are tremendous. Most of the scenarios currently available on this implementation seem to indicate that the traditional developmental tools and resources will not be sufficient alone to meeting the objectives set in the RDP, and that non-conventional tools are needed. A number of parties have submitted proposals for such non-conventional approach. All proposals of which this mission was made aware were of the 'Mega Project' type: high-technology oriented, usually designed around large-capacity digital telecommunications networks in one form or another, and require heavy investments. The mission has found these proposals as

presented to be ill conceived and mainly supply driven. Too little attention was given, if any at all, to the actual needs of the users, and to the contents to be transported by these advanced networks. It is important not to embark on expensive high-risk projects, nor to allow the new RSA to become an experimentation field for high-technology gadgets. It is equally important not to allow such immature proposals to divert the new government from systematically harnessing high-technology for its development objectives.

Based on the above we suggest that the following activities be immediately undertaken:

6.2.1. Minimum harmonised data set

An effort should be mounted immediately to obtain in the shortest possible time a minimal data set sufficiently reliable for use in major planning and decision making processes. Such effort could be organised in a three-prong approach:

1. Establish a list of all *relevant* users and producers of such a data set and organise a workshop with the task of defining a minimal common set of entities, and agreeing to standard definitions of entities used by more than one sector or user. Some efforts in this direction were already or are currently underway, but are usually either limited in their sectorial, demographic or data coverage, or had been initiated under the previous regime and their relevance to the new objectives has to be reviewed. The most relevant of such efforts is probably the World Bank sponsored project on 'Statistics on Living Standards & Development' which is being managed by the South African Labour Development Research Unit (SALDRU) at UCT. The harmonisation undertaken by the WB/SALDRU project has involved CSS, but has not sufficiently involved government departments.

It goes without saying that the minimal data set reached through the workshop will be a compromise and will not be able to satisfy *all* needs of *every* participant. It will, however, deliver a better alternative to the present situation, and it will be the first step towards an ongoing process of co-operative standardisation of data entities.

Based upon the jointly defined common data set, a **data model** should be designed as foundation for the computerised version of the harmonised data set. It should be persistently stressed that harmonising the definition of the common entities does *not* imply collecting all data in a single data base. On the contrary, the standard definitions allow the decentralised collection of data, the establishment of many application specific databases, while maintaining the possibility of aggregating or correlating such data consistently. As a principle, data should always be collected with a non-alterable spatial reference, as administrative boundaries are continuously varying.

2. In parallel with the activity described in 1 a team will be given the task of investigating all currently available **non-conventional techniques** of data-collection, evaluating these for suitability, cost and local availability, and recommending one or more such techniques suitable to be used in filling the harmonised data model with acceptable reliability in the shortest possible time. Experience from other countries (i.e. India)

could be useful in particular with regards to poverty related issues. Special attention should be given to capitalising on the experience gained from the application of non-conventional techniques in the elections process, as well as to the experience gained through the WB/SALDRU project and any other recent projects of similar nature. The team surveying the non-conventional techniques should maintain liaison with the data model team and exchange interim findings with it on regular basis.

3. Based on the results of the two previous tasks a **detailed plan for collecting** the required data using the recommended techniques will be worked out including related cost. This plan will be used to define funding sources (government, development agencies, donor agencies etc.) as such definition is strongly dependent on the total volume of the required funding. The data collected should be in the public domain and should be made widely available.

The Central Statistical Service (CSS) should be seriously involved in this activity from the beginning, but with its current traditional context should not be given sole control over the undertaking. CSS should be rather encouraged to:

- link this activity with its own programs such as the household survey planned for October 1994 (which could possibly be modified in content and extended in coverage to provide more universal results);
- ensure that any commonly defined entities are consistently integrated into its own data models, and thus act as a repository for jointly developed definitions;
- implement the necessary modifications and extensions to the upcoming 1996 population census to reflect more closely the needs of the new RSA in general and the RDP in particular;

While the objective of this short term activity is primarily to provide reliable data for immediate decision making and planning purposes, its longer perspective is to establish a stable mechanism for the CSS to continuously adapt to the needs of the developmental process as defined by the consensus of major stake holders in this area, and to integrate a wider range of inter-census updating and investigating activities using a wide range of new techniques.

It is clear that while the activity described above is vital for the capability of the new government to make sound decisions, it is also fairly complex and *must* be accomplished in very short time. The mission recommends therefore that use be made of the locally available expertise in the management of complex projects, such as the one available in large parastatal corporations like Armscor or the Industrial Development Corporation (IDC). In particular, Armscor has a highly developed methodology for managing large and complex projects, and capacities seem to be currently available in view of the reduction of defence budgets.

6.2.2. Survey of available data

In parallel with the activity described in 6.2.1. an activity will be started immediately to survey all existing data collections which are relevant to the RDP needs (the minimum of

which is defined by the forum described under 6.2.1) in all sectors (public, parastatal, private, NGOs etc.). This activity will concentrate mainly on statistical type information, although collecting information on other types of available information would be useful as this survey could be extended in the near future to include such information. The survey should include information on:

- The detailed content of the information (entities description)
- The size of the collection or sample
- The exact geographical region(s) covered by the information
- The date or time-periods of coverage
- The accessibility to that information (type of ownership, methods & media of dissemination etc.)
- Cost of access (if any) of the surveyed information collections
- Owner's full co-ordinates (address, telephone, fax, telex, data network host address, e-mail contact, and contact person(s)).

The surveying team should be provided with as high a political support and authority as possible, as it is only normal to expect that some collection owners will be reluctant to provide full information. The 'Reference Group' approach used in the WB/SALDRU project to provide legitimacy and credibility to the data collection undertaking is interesting and should be considered as a possible solution for providing such authority.

The survey should build its effort in conjunction with parties planning similar undertakings, such as the Meta-Database (or data base of data bases in government) planned by the Sub directorate of Meta-Information in the Department of National Education, and should take into consideration the results of similar efforts such as the 'Regional & Cross-Cutting Studies' generated by the WB/SALDRU project. It should be noted, however, that the survey proposed here should not be limited to (electronic) databases, nor to the governmental sector alone, but should include rather any relevant collection of information from as many sources as possible. These could include international organisations and donor agencies, regional organisations, NGOs, parastatal organisations and private institutions and individuals.

The data collected through this survey should be seen as an additional set of data supporting the harmonised minimal data set for specific areas, and should be organised in such a way that planners at all levels who are working on a particular region could find out rapidly if any relevant additional information or studies are available, and thus be possibly able to enhance their understanding of that region in conjunction with the data obtainable from the primary data set. The wide dissemination of the survey results using printed, magnetic and electronic media should form an integral part of this activity.

6.2.3. Integrated Test Environments for Hi-Tech Supported Development

Broadly based development projects such as the RDP address multiple needs simultaneously. No single tool or resource is capable of exclusively delivering the expected results to all these different needs. It is rather necessary that the whole array of available tools and resources must be mobilised and each applied where it is most effective in order to achieve any significant development progress. In the search for non-traditional development tools available in the new South Africa two are particularly worth noting:

- The locally available high-technology base;

- The broad participation of the concerned communities in the development process, not only as beneficiaries, but also as contributors to the process.

The unlocking of the potential of these two tools and their possible inter-locking could provide rare development opportunities.

The following approach is therefore proposed:

- Four suitable locations **representative** of the different under-development patterns encountered in South Africa will be identified. Preferably locations with well documented current status should be selected.
- Concrete priorities and objectives of development for these four locations will be formulated jointly by the relevant central departments/provincial authorities and the concerned communities and their local authorities.
- Interested line departments, development agencies, research centres, universities and private corporations, will be requested (each in its field of competence) to submit **detailed** non-conventional solutions in response to the defined needs. Such solutions may or may not include high-technology component(s), and such component(s) may or may not be centred around high-capacity digital telecommunications. Each solution will specify the time frame within which it claims to achieve the desired results.
- Submitted **solutions** (not ideas, concepts or prototypes!) will be screened for suitability for a pilot implementation according to strict criteria evaluating 'Scalability' (ability to be reproduced in similar environment, with the same resources to produce the same results as in the pilot implementation). It should be emphasised that the primary purpose of the pilot implementation is:
 1. To test solutions sufficiently mature for large scale deployment in terms of their suitability to the actual needs of the community, their superiority to alternative methods in achieving **measurable** results, their actual deployment and operational costs, and their reliability and maintainability where applicable.
 2. To provide an environment in which communities can provide direct input as to their needs, as well as to how far the services provided match these needs.
 3. To produce knowledge about the application of new development solutions in the defined environments with the purpose of further improving the more promising of these solutions in preparation of a larger deployment.
- In close co-operation with the local authorities of each of the four selected locations a joint co-ordination centre (JCC) will be set up. The actual name of each JCC will be left to the local authorities and should reflect their approach to the development of their communities. The JCC can be located in a school, clinic, or community building, which is provided by the community itself. If special prefab shelters or mobile units are to be used, they must be provided by an organisation committed to fund the large scale deployment of similar units, if proven viable. Where the projects identified for a certain location require a special telecommunications infra-structure, the latter will be provided either by Telkom through its current capacities or by any other private network operator possessing such infra-structure in the area of concern. The actual cost for the provision of

the telecom infra-structure will be accounted for in the evaluation of the solution(s) requiring that infra-structure.

- A joint team of solution providers, development agencies and local authorities will develop a set of simple data collection and analysis mechanism to identify user needs, development workers needs and usage patterns.
- At the end of the time period pre-specified by each solution for achieving its objectives, the results achieved will be evaluated independently from the solution supplier.

The concept of the JCC is to provide as realistic a test bed as possible for innovative development solutions, while avoiding large-scale high-risk experiments. A typical JCC would include a number of projects such as: Social services provided by the local authorities, a postal distribution service, a wireless telephone distribution system, public telephone/fax/data services, a tele-medical system for supporting the local clinic or paramedics, a distant-learning system, a community library & resource centre (which could include shared audio/visual and/or computer equipment) etc. The JCC will operate either as the hub of technology-based services or as the support base for conventional services. An administrator from the community itself or its local authority would be identified and provided with initial training in the administration principles and procedures of the JCC as well as in the co-ordination of activities. External personnel will only be used for passive monitoring purposes.

The mission finds it difficult to identify a single institution which would be appropriate to manage this activity, requiring as it does technological knowledge and more importantly a good understanding of the broader purpose of the project. We would recommend therefore that this project be managed by a team including Etienne Theart, Mark Orkin, Diana Callear and a professional information scientist if one is assigned to IDRC ROSA.

6.2.4. An inventory of fora documents

The transition from apartheid to democratic government in South Africa has been paralleled by the emergence of consultation and negotiating fora dealing with a very wide range of issues including economics, electrification, health, local government, to name just a few.

One output of these fora has been large volumes of documentation, more or less formally produced and more or less easily available. The documents may in many cases contain information which will be valuable to future development processes. They represent the understanding of a wide range of actors on a wide range of issues at a particularly crucial time in the history of the country. They also demonstrate a process of dialogue and consensus building that may be unique in modern times.

Some of the documents produced by these processes may be entering systems for bibliographic control. But it is clear that this is not the case for many.

The mission admits that it had only limited contacts with the library community and regrets that fact since libraries and trained librarians have a potential role in opening information channels within government and in supporting the development of community resource and learning centres. One group to which we were directed on several occasions and which we had the opportunity to meet was TransLis, a coalition of library and information service associations, which grew out of the Library and Information Services Research Group operating within the framework of the National Education Policy Investigation. TransLis is a

loose coalition which is working towards a system of libraries and information services which is appropriate in design and delivery to the requirements of the people of South Africa. It is present in many regions of the country. We believe that it would be appropriate to include TransLis in the Advisory Group of the Information Management Project and to charge it with the task of defining an approach to the problem of bibliographic control of fora documents and of document delivery. In carrying out this task, SABINET and the national library structures should be consulted to ensure that appropriate bibliographic standards are applied. The first effort should be directed at developing a consensus among TransLis members on the nature of the project and a tentative work programme which would not only capture data about existing documents but also ensure that new documents are captured systematically. The aim would not be to create a centralised system but a network of databases through which information on the documents and their availability could be obtained. External funding, probably on a modest scale, might be required to implement the project.

The benefits could be twofold: access to an important category of documents which risks dispersal and, for all practical purposes, disappearance; and strengthening of a coalition of library associations that is attempting to recast the mould of library service in South Africa.

6.2.5. Safeguarding the data and records of the former TBVC states

During the apartheid era many central government services did not extend to the TBVC states; these include those of the Central Statistical Services and the transversal administrative systems that were in place in the central government to manage personnel, pensions, social services, finance and so forth. The governments of these states therefore developed their own systems and built their own databases, manually or using computer technologies, often employing external consultants in the process. These governments no longer exist and will be replaced by or absorbed into provincial government structures. The question arises as to what happens to the data and documents that have been produced over the years of 'self government' and that may contain information essential to the future development of the regions. Ownership of the data or documents produced by or for the homelands governments is now vested in the central government; some line departments are issuing guidelines to their provincial counterparts; but no systematic measures are in place to safeguard existing sources.

The mission recommends that a team made up of representatives of the provincial governments, CSS and CFA/PSC, and including a librarian with expertise in government documents, be constituted to define a methodology to address the problem outlined above.

The methodology should include:

- the definition of the types of information to be targeted, including statistics, administrative data, documents and reports issued by the governments or produced under consultancy contracts;
- documentation of the legal requirements with respect to these sources of information, including rights of ownership, access and privacy;
- the identification of steps already underway in line departments or provincial governments to inventory, collect or store relevant materials;
- a strategy to identify, evaluate, catalogue and secure data, whether in machine-readable or printed form;
- the format of a report describing the data sources and documents and giving an indication of their disposition.

The methodology would then be applied on the ground in a series of short missions (one to two weeks is likely to be sufficient) covering the four ex-homelands. It might be advisable to finalise the methodology during the course of the first mission.

This project could probably be completed in a total time of three months. It has some urgency. Responsibility for the project could be vested with any of the four players identified above. Consideration should be given to the involvement of the national library structure (as a source of expertise in government documents) and the Public Archives. The auditor general's office should also be consulted to see whether recent audit reports help define available data.

6.2.6. Application of guidelines for decision-making on new information systems in the short term

Concerns were expressed to the mission about the capacity of the government in the short term to prevent decisions on the acquisition of new information systems and technologies which would be inconsistent with longer term goals (only broadly defined thus far) and which could be excessively driven by suppliers of equipment or technology. Such decisions could lead to unnecessary duplication of systems in sectorial departments and at different levels of government and could preclude options for integration into broader systems in the future. The risk of duplication is particularly high during the period when the provincial governments are under formation and lines of communication have not necessarily been clearly established.

Some suggestions were made that a moratorium be called on the development of new systems. The mission does not recommend this approach. It could stifle essential initiatives and would require heavy procedures to administer because a channel for exceptions would have to be in place. A mechanism seen to guide proposals for new systems rather than hinder them would appear more appropriate.

The following checklist could serve as the basis for such a guide:

- have user groups been clearly identified;
- have user needs been clearly defined;
- have these processes involved participation of the proposed users themselves;
- has consultation taken place with relevant line departments (private sector organisations, NGOs?) to ensure that the data to be output from the system is not already available;
- has consultation taken place with CFA/PSC (and relevant line departments) to ensure that the same application has not been developed elsewhere;
- have standards been applied to ensure that the architecture of the system is open and can communicate easily with related systems;
- have data standards been applied so that outputs can be integrated into other systems;
- is the technology to support the system available locally.

The guidelines should not serve to assess the internal coherence of system design but rather to determine whether the decision to proceed with the system can be justified from a broad governmental perspective and is consistent with RDP priorities.

In the absence of the IPCU the Data Systems Directorate in CFA/PSC is most suited by its mandate to expand this checklist into administrative guidelines. This unit is also represented at State Tender Board sessions which authorise expenditure inter alia on information system

projects. An alternative home for this activity could be the Central Computer Service which has a knowledge base on information systems developed within government departments. The RDP office should initiate this process and ensure that the guidelines take user needs sufficiently into account.

7. SHORT TERM STUDIES

As previously explained this section includes studies and activities which could be primarily initiated by IDRC.

7.1. Legal Framework For Information Policy

A number of the principles and objectives declared by the new government and included in the RDP relate directly to freedom of information, access to information, protection of privacy, transparency and accountability of government, and less directly to the complex area of ownership of information. All these issues are intricately related to legislation providing a suitable framework for their implementation in society. The mission has identified a need for a comparative study regarding legislation developed by different nations, both in the industrialised and the developing world, on these issues. The study should not aim at compiling such legislation, but rather at providing a compressed intelligible input to the South African parties interested in these issues summarising the experiences of these other nations and the salient content of their legislation. The compressed form is needed in recognition that these interested parties are currently so overloaded with the transitional process that no capacities are available to complete the task locally.

An additional, although somewhat autonomous, component to this study could be a survey of existing South African legislation relevant to that field. Because of the fragmentation of the information sector in the government and other sectors, such legislation cannot be found in one group of legislative texts, and has to be rather collected across the different laws. Possible partners for this part of the study could be the Department of Justice and the Centre for Applied Legal Studies (CALS). The involvement of a government department from the early stages on is intended to avoid the 'government bypassing' resulting from the involvement of NGOs only, a practice universally used during the apartheid regime.

The combination of the outputs of the two components described above should provide a basis for local work, perhaps through a Parliamentary Committee on Information, leading to recommendations on the introduction of new legislation and/or the modification of existing legislation relating to information.

7.2. Information Exchange between Central, Provincial and Local Governments

The interim constitution of the new South Africa has established three levels of government: central, provincial and local. It has also defined nine new provinces, which amalgamate the previous four provinces with the 'independent' TBVC states and the self-governing regions. The issues related to information exchange and co-ordination between these three levels of government are compounding the challenges already created by the necessity to restructure the entire government system to reflect the new realities and remove the inequity created by the apartheid regime. On several occasions the preparatory team was queried about how such exchanges are being handled in the Canadian context. The mission therefore proposes that a study be undertaken, which would look at the mechanisms established for such purpose in Canada and provide a compressed and intelligible report on these to the new South African government. This activity could be linked to IDRC/CIDA supported Public Service Policy Programme.

7.3. Survey of South African Education & Training Capacities in the Information Field

Whatever final structures are put in place for the formulation of South Africa's information policy and the co-ordination of the information activities within its public sector, it is clear that a significant amount of education and training in information science disciplines will be needed to provide the human infrastructure and knowledge base needed within that sector. As an example, the central co-ordination staff as well as the currently non-existent 'information liaison officers' in all government departments and sub-departments as well as in provincial governments will have to be trained adequately. In addition, the community based approach to development will require a large number of community resource facilitators, whose tasks are heavily information oriented, and who need also to be trained. It is therefore suggested that a study undertakes to survey quantitatively and qualitatively all available resources for training and education in information related disciplines in South Africa and their capacities, in order to assess the feasibility of such broad training and the necessity, if any, for restructuring and re-orientation of some of these resources.

8. TERMS OF REFERENCE OF THE PROPOSED MISSION & REQUIRED EXPERTISE

The mission gave considerable thought to the most useful contribution that IDRC could make to the process of strengthening information support to the new government of South Africa in the context of the impressions it gained through discussion with many local actors. It was clear that an immediate need existed for programmes to address the main information requirements of the RDP. The intention to create structures and procedures through which discrete information programmes could act as building blocks in a longer term process of rationalisation was equally clear. How to develop such an approach in a period of considerable political fluidity, and, in particular, where to locate a policy and co-ordination function, was less clear. The mission homed in on a short list of activities designed to address immediate needs, identified areas where there appeared to be a consensus that further study was required and indicated the broad principles of information policy and some of the major issues it should address. The further definition of the coverage and content of a national information policy, and the structures needed to implement it, would therefore appear to be an area where further input from IDRC could be most valuable. The timing of a future mission should probably be determined by the extent to which the political situation has stabilised (for example with respect to the division of responsibilities between the central and provincial governments) and the progress that is made on some of the projects proposed in this report. If IDRC agrees to strengthen the present co-ordinating unit in its Johannesburg office it should be able to monitor closely progress on the projects.

Terms of Reference for the mission should include:

1. assessment of the progress made towards establishing mechanisms to promote information policy and co-ordination within the government and developing an associated programme of work;
2. evaluation of the results obtained from work on the projects identified in this report, whether interim or final, and of the extent to which they have served to reinforce co-ordination among the relevant units;
3. evaluation of the results obtained from the commissioned studies; assessment, in co-operation with South African authorities, of their relevance to the South African situation and of any further action that can result from them;
4. reassessment of the policy proposals; and
5. adaptation of the policy framework and the policy and co-ordination mechanism to reflect lessons learned during the exercise outlined above.

Additional tasks could include an examination of potential linkages between South Africa's information programmes and those of the Southern African Development Community (SADC) which is an area that this mission was not in a position to explore.

If this scenario is accepted, the main requirement for the mission will be expertise in national information policy from countries which have experience of implementing such policies following different models. Singapore, India and Jamaica might provide such expertise. But the mission should also include expertise from countries that have achieved co-ordination in an incremental fashion: Australia, Canada or the United States for example.

Annexure 1

Terms of Reference

1. Develop and propose, in consultation with the Information Policy Working Committee of the 'Democratic Alliance' within South Africa, Terms of Reference for an IDRC Mission to assist in the establishment of a National Information Policy and Strategy for South Africa;
2. Propose a framework for the development of a National Information Policy which is responsive to identified public sector needs and priorities;
3. Establish, within the proposed Information Policy framework, strategies for the achievement of long, medium and short term goals;
4. Identify a set of specific and immediate activities requiring action over the next 24 months and necessary for the achievement of longer term goals;
5. Highlight areas where IDRC would be best able to make a contribution towards the development of a National Information Policy and Strategy for South Africa;
6. Identify particular issues which may need to be researched or background studies and related activities which should be undertaken as a result of this consultancy to facilitate the work of the IDRC Mission;
7. Make recommendations on the expertise and experience required by the International members of the proposed IDRC Mission to South Africa;
8. To finalise and submit a report, as outlined above, to the Director General, Information Sciences and Systems Division and to the Director of the Centre's Regional Office for Southern Africa.

Annexure 2

Working Committee

Mr	Jeremy	Cronin	SA Communist Party
Dr	Bernie	Fanaroff	RDP Office
Mr	Mike	Muller	ANC
Mr	Devan	Naidoo	Co-ordinator
Mr	Andile	Ngcaba	ANC Department of Information Systems
Mr	Lechesa	Tsenoli	SA National Civic Organisation
Mr	Marc	van Ameringen	International Development Research Centre

Annexure 3

Advisory Group

Mr	Len	Abrams	Ministry of Water Affairs
Mr	Alexi	Bizos	National Housing Forum
Mr	Bill	Bowles	Democratic Media Trust
Ms	Diana	Callear	Land & Agriculture Policy Centre
Ms	Sarah	Cliffe	Congress of SA Trade Unions
Dr	Chris	Jardine	Spoornet
Mr	Tim	Jenkin	ANC Department of Information & Publicity
Mr	Ray	Mabope	RDP Office
Mr	Charles	Meth	University of Natal
Ms	Jeanette	Minnie	Freedom of Expression Institute
Mr	Ravi	Naidoo	National Labour & Economic Development Institute
Dr	Sibusiso	Nkomo	Public Service Commission of SA
Dr	Chippie	Olver	RDP Office
Mr	Abba	Omar	Armaments Corporation of SA
Prof	Mark	Orkin	Community Agency for Social Enquiry
Dr	Michael	Power	Health Information Group
Mr	Selby	Shezi	National Institute for Economic Policy
Mr	Mark	Swilling	University of the Witwatersrand School of Public & Development Management
Mr	Etienne	Theart	Eskom
Mr	Hilton	Trollip	Energy Development Research Centre

Annexure 4

Organisation	Representatives
Altron	Dr David Jacobson, Ms Pat Holgate, Mr JP de Villiers, Ms Marianne Robertson, Mr Frank Gartland, Mr Leew Jones, Mr Thinus Potgieter, Mr Graham Bell, Ms Mary-Ann Tennant, Mr Jean-Pierre de Villiers
Armsscor	Mr Abba Omar, Mr Tielman de Waal, Mr Ben du Bruyn, Mr Johan Kruger, Mr de Jager, Mr Jan Oosthuysen, Mr Don Henning, Mr Enoch Sithole, Mr Henry Abdul
Central Computer Service	Mr Johan Hechter, Mr Noel Page, Mr Gert Lotz, Ms Lida Aucamp
Central Economic Advisory Services	Mr Jan Dreyer
Central Statistical Services	Dr Treurnicht du Toit, Mr Johan Rosenstrach
Central Witwatersrand Metropolitan Chamber	Mr Adrian Enthoven, Mr Neville Perry, Mr Gevin Cross
Centre for Applied Legal Studies	Mr Jonathan Klaaren
Centre for Education Policy Development	Mr Peter Buckland, Ms Helen Perry
Community Agency for Social Enquiry	Prof Mark Orkin
Council for Scientific & Industrial Research	Mrs Tina James, Mr Roy Page-Ship, Dr Bob Day, Mr Danie Perold, Mr Dave Mc Devette, Mr Neil Viljoen
Democratic Media Trust	Mr Bill Bowles
Denel Informatics	Mr Xolani Qubeka, Mr Roelf Swanepoel, Mr Con Purchase
Development Bank of Southern Africa	Dr Dan du Plessis, Mr Neels Wolmarans, Ms Janine Erasmus, Mr Jim Duncan, Mr Deon Richter, Mr Glynn Davies, Mr Ken Finlayson
Education Policy Unit, University of the Western Cape	Prof Harold Wolpe, Ms Michelle Williams, Mr Tim Mosdell, Mr Tembile Kulati
Eskom	Mr Etienne Theart, Ms Sarah Cliffe, Ms Diana Theron, Mr Andy Pollard

Freedom of Expression Institute	Ms Jeanette Minnie
Health Information Group	Dr Michael Power, Dr Olive Shisana, Ms Lyn Hanmer, Ms Debbie Bradshaw, Mr Peter Heimann, Mr Koos Louw, Mr Peter Barron, Mr Sedick Isaacs, Mr Louis Reynolds, Mr David Power
Human Sciences Research Council	Professor Lawrence Schlemmer
Industrial Development Corporation	Mr Elmar du Plessis
Labour Research Service	Mr Mark Anderson
Land and Agricultural Policy Centre	Ms Diana Callear, Mr David Cooper, Ms Karen Didcott
Library & Information Worker's Organisation, University of Cape Town School of Librarianship	Ms Cathy-Mae Karelse, Dr Mary Nassimbeni, Mr Colin Darch
National Housing Forum	Mr Alexi Bizos
National Land Information Systems	Mr Derek Clarke, Mr Ken Lester
Office of the Commission for Administration	Mr Pine Pienaar, Mr van Rhyn, Mr du Pisani, Mr Ferreira
RDP Office	Minister Jay Naidoo, Dr Chippie Olver, Mr Ray Maboep, Dr Bernie Fanaroff
Rural Development Forum	Ms Laurie Adams, Ms Pauline Khuzwayo
South African Institute for Distance Education	Mr Siven Maslamoney
South African Labour & Development Research Unit	Prof Francis Wilson, Mr Dudley Horner
South African Non-Government Organisations Network	Ms Anriette Esterhuysen
Telkom	Mr Wallie Broeders, Mr John Swart
University of the Witwatersrand	Mr Mark Swilling, Dr Mike Muller Prof Neil Duffy, Prof Hanoch Neishloss, Mr Andre Spier, Mr Ben Cashdan

Annexure 5

May Programme

Date	8h30-10h30	11h00-13h00	13h00-14h00	1400-1600	Evening
Sun 15	Arrival				
Mon 16	Working Committee			Briefing	
Tue 17	Central Statistical Service	Human Sciences Research Council		Advisory Group	
Wed 18	Denel Informatics	Armaments Corporation of SA		Office of the Commission for Administration	
Thurs 19	Telkom	Council for Scientific and Industrial Research		Central Computer Services	
Fri 20	Altron	Central Witwatersrand Metropolitan Chamber		Central Economic Advisory Services	Marc van Ameringen & Mike Muller 16h30-17h30
Sat 21	SA Non-Governmental Organisation Network, Democratic Media Trust, Freedom of Expression Institute, SA Institute for Distance Education, Centre for Applied Legal Studies, Rural Development Forum.				
Sun 22					Andile Ngcaba 20h00-23h00
Mon 23	University of the Witwatersrand	Centre for Education Policy Development	Community Agency for Social Enquiry	Land and Agricultural Policy Centre	Progress Meeting with Working Committee
Tues 24	Industrial Development Corporation of SA	Development Bank of Southern Africa		National Housing Forum	
Wed 25					
Thurs 26	Office of Minister Jay Naidoo	Education Policy Unit	National Land Information Systems	Health Information Group	Labour Research Service
Fri 27	Library & Information Worker's Organisation, School of Librarianship, UCT	South African Labour & Development Research Unit, UCT			
Sat 28	Working Committee and Advisory Group 8h00-11h00				
Sun 29					
Mon 30	Working Committee 10h00 - 12h00				

Annexure 6

List of Documentation

African Journal of Library, Archives and Information Science
Volume 4.1, April 1994

Altron

Submission to the Mission Preparatory Team

ANC Education Department

Draft (for discussion purposes only): 'A policy framework for education and training'

ANC Legal, Constitutional Affairs and Civil Service Unit

A plan for National and Provincial Government & Administrations

Armcor

Submission to the Mission Preparatory Team

Bernie Fanaroff

Process for Improving Efficiency and Effectiveness in State Spending

Broadcasting Act

No. 73 of 1976

Buys, Andre

Nuclear Policy in a Democratic South Africa:

The conversion of South Africa's nuclear weapons facilities

Central Computer Service

Submission to the Mission Preparatory Team

Central Statistical Service

Users Guide and Submission to the Mission Preparatory Team

Commission for Administration

Submission on Government Information Systems

Computer Mail, February 1994

Integrated systems at government level

Computer Society of South Africa

Code of Conduct and Code of Practice

Constitution for the Republic of South Africa 1993

COSATU/National Committee for Labour Intensive Construction

The Framework Agreement for Public Works Using Labour Intensive Construction Systems

Council for Scientific and Industrial Research

Submission to the Mission Preparatory Team

Council for Scientific and Industrial Research/Development Bank of Southern Africa
The Housing Information System

Democratic Media Trust
Submission to the Mission Preparatory Team

Denel Informatics
Submission to the Mission Preparatory Team

Department of State Expenditure
Computer use in government Departments

Department of State Expenditure
Description of Provincial Computer Bureaux

Department of State Expenditure - Govnet: the Past, Present and Future
Network Infrastructure for Departmental Computer Bureaux

Department of Water Affairs and Forestry
Rural Water and Sanitation Institutional Proposals

Development Bank of Southern Africa
Economic and social memorandum - Region D

Development Bank of Southern Africa
Presentation to the Telekom SA Ltd 'African Horizon Conference': The provision of telecommunication services in developing areas - an economic development perspective

Development Bank of Southern Africa
Public sector transformation in South Africa: A strategic perspective

Development Bank of Southern Africa
Telecommunications development as part of restructuring. A range of possible scenarios (teletechnological options) and likely costs

Economist Intelligence Unit
Country Profile - South Africa

Ernst & Young
Submission to the Mission Preparatory Team

Eskom
Blueprint for enterprise computing

Freedom of Expression Institute
Submission to the Mission Preparatory Team

Health Information Group
Submission to the Mission Preparatory Team

Health Systems Trust
Towards a National Health System for South Africa

Human Sciences Research Council

Brief Outline on the Scope and Topics of Research: 1994

IDRC

Assessment Indicators and the Impact of Information on Development

IDRC

National Information and Informatics Policies in Africa

IDRC/ANC/SACP/SANCO Mission

Environment, Reconstruction and Development in the New South Africa

Independent Broadcasting Authority Act

No. 153 of 93

Industrial Development Corporation of South Africa Limited

Application Manual

Industrial Development Corporation of South Africa Limited

Support programme for industrial innovation

Information Development Volume 9, No. 1/2, March/June 1993

Rural Community Resource Centres: a sustainable option for Africa?

International Data Corporation

TechKnowledge - Directory of products and services

Institute of National and Local Government

Conference on Change Management: 26-28 March 1994

Working document on organising and managing change: A strategic perspective. Input into Debates about Preparations for Institutional Change at Provincial Level.

Land and Agricultural Policy Centre

Issues relating to Land Information Systems

Land and Agricultural Policy Centre

Strategy for Managing Drought in South Africa

Mabin, Alan

The Impact of Apartheid on Rural Areas of South Africa

Military Research Group

Proposed Curriculum for Defence Management Programme

Muller, Mike & Ngcaba, Andile

Draft 3: 'Towards a national information policy and strategy to support the public sector to implement the reconstruction and development programme and achieve effective, democratic governance in South Africa'

Multi-Party Negotiating Process : 17 November 1993

Contents of Volume II



National Computer Liaison Committee

Framework For A National Information Technology Strategy (1994)

National Consultative Forum on Drought

Indicators for Poverty and Drought: Thinking about the Components of a Food Security Monitoring System for South Africa

National Economic Forum

Proposals on a Framework for Implementation of a National Public Works Programme

National Housing Forum

Submission to Meeting on Strategies for Socio-Economic Development

National Land Committee

The Bloemfontein Community Land Conference: 12-13 February, 1994

National Telecommunications Forum

Brief description

University of the Witwatersrand: School of Public & Development Management

Memorandum on the Establishment of a National Information System for Local and Regional Governance and the Reconstruction and Development Programme

Reconstruction and Development Programme

Submission to the Mission Preparatory Team

Rural Development Forum

Strategy for Managing Drought in South Africa

South African Bureau of Standards

Procedures for the technical work in the preparation of South African standards

Standing Committee for Electronics

Final Report of the Smart Card Working Group

Standing Committee for Electronics

*Final report of the Technology-supported Education and Training Working Group:
'The use of technology to assist in solving the problems in education and training in SA'*

Statistics Act

No. 66 of 1976

TransLis Coalition

Submission to the Mission Preparatory Team